

signs, scrapbooks, newspaper clips, advertisements, reference materials, and a host of other print elements figure prominently in the mysteries. Texts that appear on screen are custom designed and tested in formative evaluation for maximum legibility, and there are sufficient contextual cues to allow even struggling readers to keep up. Even if a child never picks up a pencil while watching **GHOSTWRITER**, he or she must read--or take a stab at reading--in order to participate fully in the adventures. This is a powerful incentive for children to exercise their literacy muscles. In addition, every hour-long unit of **GHOSTWRITER** (the typical broadcast comprises two back-to-back half-hour episodes) includes a short "interactive" interlude, entitled "Do the Word Thing," during which children are invited to perform specific reading or writing activities.

COMPELLING TOPICS. **GHOSTWRITER** adventures are whodunits with a difference. The cases the team takes on center on personal and social issues of concern to the program's target audience--topics such as drugs, gang violence, peer pressure, telling lies, family conflict, pollution, and homelessness. Some stories incorporate fantasy elements or borrow from familiar genres that children know and enjoy (comic books, science fiction, music videos). All the mysteries lead the team to explore new literacy worlds, each with its own vocabulary, musical accent, and story-related challenges. By treating a range of subjects in its programming, **GHOSTWRITER** seeks to cast the widest possible net for drawing in disaffected readers and writers. At the same time, its issue-oriented format provides teachers and youth-serving organization leaders with a valuable, age-appropriate resource for engaging children in discussions of relevant social and ethical questions.

GHOSTWRITER Print

As incorporated in **GHOSTWRITER**, unique strengths of television and print are coordinated in common effort. Television is especially good at modeling specific behaviors and at motivating children to learn. It can excite children about words, engage them in on-screen reading, and even stimulate them to write. Traditional print (e.g., books, magazines, and newspapers) is especially good at providing hands-on ("eyes-on") opportunities to practice reading skills and gain familiarity with print conventions. While broadcast television signals are universally and indiscriminately available within their coverage areas, magazines and instructional materials can be targeted efficiently to individuals and groups in specified categories. In **GHOSTWRITER**'s case, a special target is minority and low-income children--children who might not ordinarily be PBS viewers and therefore might be unaware of **GHOSTWRITER**'s existence. (Indeed, for many children who participated in **GHOSTWRITER**'s outreach program, CTW's print materials were their *only* exposure to **GHOSTWRITER**.)

To ensure that **GHOSTWRITER** would be a print as well as a television experience, CTW created an array of **GHOSTWRITER** materials for children to use and enjoy--at home, in school, or in their after-school programs. As part of its outreach effort, CTW also developed companion publications for the teachers and program leaders who work with children in both formal and informal learning settings. **GHOSTWRITER** print materials are specifically designed to help children gain confidence in their reading and writing abilities. Like the television series, they invite children to "play along" with the **GHOSTWRITER** team, but they are not dependent on the series for advancing their literacy objectives. The **GHOSTWRITER** print program affords children opportunities to read interesting, colorfully illustrated magazine articles; express themselves

through writing; solve puzzles and word games; and delve deeper into text, if they so choose, through a line of **GHOSTWRITER** books. **GHOSTWRITER** print directed to children includes:

GHOSTWRITER MAGAZINE. The specific objectives for **GHOSTWRITER** magazine are to provide compelling opportunities for children to read and write, and to encourage participatory viewing of the TV series. Each issue contains stories, puzzles, and special “write-in” activities that invite readers to write to the publication, as well as features that encourage children to pick up a pencil and write in their own copies of the magazine. **GHOSTWRITER** magazine is strategically placed; children in participating schools and after-school programs receive **GHOSTWRITER** magazine without charge, as do libraries, various community organizations, and PBS stations. The inaugural issue of **GHOSTWRITER** magazine in both Seasons One and Two ran to 16 pages; subsequent issues have contained eight full-color pages. One issue of **GHOSTWRITER** magazine is published for each Arc of the television program. By the end of the second broadcast season (Arcs 1-15), some 34 million copies had been distributed.

COMPLEMENTARY MAGAZINE COVERAGE. A **GHOSTWRITER** feature appears in each of 10 issues each year of *Kid City*, CTW’s general-interest magazine for 6- to 10-year-olds (circulation: 300,000).

NEWSPAPER FEATURE. The **GHOSTWRITER** project seeks to interest children in a variety of different print forms, including newspapers. A weekly **GHOSTWRITER** newspaper feature is produced in-house. It contains word puzzles, games, and examples of children’s writing, and can be tailored by participating newspapers to meet local needs. It also seeks to teach children about the different parts of a newspaper. The weekly feature, made available to newspapers through the Newspaper Association of America Foundation and the National Newspaper Foundation, appears in more than 100 American and Canadian newspapers, with a combined circulation of approximately 5 million.

GHOSTWRITER BOOKS. In association with CTW, Bantam Doubleday Dell is publishing a series of 60 planned **GHOSTWRITER** paperback books. Twenty titles have appeared thus far; and a total of 1.7 million copies are in print. The series includes original fiction, nonfiction, and activity and creative writing books based on the show, and is being sold in bookstores and in schools through Bantam’s Trumpet Book Club (which reaches 400,000 classrooms nationwide).

In addition to the print elements above which are targeted to children, the **GHOSTWRITER** print family includes several products intended for use by adults, as described in the outreach section below.

GHOSTWRITER Outreach

CTW has a long-standing interest in exploring new ways in which television and print can be configured to meet the changing educational needs of children.⁸ One of the **GHOSTWRITER** project’s objectives is to encourage children to participate in literacy activities in a variety of formal and informal learning settings. CTW believes that it is especially important for reluctant or struggling readers to make the connections between reading and writing and their everyday lives.

⁸ CTW, for example, has worked with local and national groups to develop special materials on fire safety and prevention of lead poisoning. Also noteworthy is the *Sesame Street* Preschool Educational Program (PEP), which works through local partners such as PBS stations, child-care professionals, and community organizations to link viewing with related reading and follow-up activities. *Sesame Street* PEP has already trained more than 24,000 child-care professionals who reach some 229,000 children.

To help children better appreciate these links, CTW developed an ambitious outreach program aimed at extending the *GHOSTWRITER* experience to schools and places where children regularly gather to relax, have fun, and be with friends. *GHOSTWRITER* outreach has two components: in-school support and after-school support.

IN-SCHOOL SUPPORT. An important objective of the project is to ensure that teachers are able to use *GHOSTWRITER* in their classrooms as a flexible resource for augmenting their literacy curricula. To this end, CTW produced a variety of teacher materials, including a 48-page Teacher's Guide for Arcs 1-10, a 32-page Teacher's Guide covering Arcs 11-16, a 4-page Teacher's Guide, and a 16-page Classroom Activity Booklet with reproducible pages. Bantam also created a Teacher's Guide for its line of *GHOSTWRITER* books.

The Classroom Activity Booklet is a compilation of *GHOSTWRITER*-related pages that appear in *Creative Classroom*, CTW's magazine for teachers. It contains open-ended reading and writing activities that can be used in conjunction with any *GHOSTWRITER* television program or magazine. The Teacher's Guides contain plot synopses, provocative discussion questions, and activities for each episode of *GHOSTWRITER*. The objectives for the Classroom Activity Booklet and the various Teacher's Guides are to encourage teachers to use *GHOSTWRITER* with their students, and help them integrate *GHOSTWRITER* into their classroom curricula.

In Season One, more than 270,000 copies of the Classroom Activity Booklet were distributed in schools in two ways: as free 16-page booklets (about 100,000), and as serialized inserts in *Creative Classroom* in 1992 and 1993 (about 170,000). In addition, *Creative Classroom* continues to run tips for teachers using *GHOSTWRITER*.

During Seasons One and Two, 26,000 copies of the 48-page Teacher's Guide covering Arcs 1-10 were distributed in schools through instructional television (ITV), while an additional 879 copies were distributed by Great Plains National (GPN). In Season Two, based on teachers' enthusiastic responses to *GHOSTWRITER* magazine, 40,000 copies of a separate four-page Teacher's Guide with suggestions on how to use the show and the magazine were mailed with every issue of *GHOSTWRITER* Magazine (a total of 280,000 copies were distributed). The 32-page Teacher's Guide covering Arcs 11-16 will be sold exclusively by GPN.⁹

As part of CTW's in-school support program, a significant effort was made to reach teachers through national, regional, and local meetings of professional associations. For example, CTW conducted workshops and exhibited and distributed *GHOSTWRITER* materials at annual conferences of the National Council of Teachers of English, the International Reading Association, and the American Library Association. CTW presented *GHOSTWRITER* at annual regional and national conferences of the instructional television community. CTW also responded to requests for workshops around the country, conducting dozens of local and regional workshops for several hundred teachers. In addition, CTW advertised *GHOSTWRITER* in professional journals such as *The Reading Teacher*.

⁹ The Season One Teacher's Guide, covering Arcs 1-10, was developed with *GHOSTWRITER* project funds and distributed free for the first project year (with a \$1 charge for postage and handling). The Season Two Teacher's Guide, covering Arcs 11-16, was developed with funding from GPN for distribution with *GHOSTWRITER* videocassettes in schools. GPN is currently the sole distributor of Season One and Season Two Teacher's Guides. They sell for \$3.00 each plus shipping and handling, or are free with the purchase of a *GHOSTWRITER* videocassette, or are available at a discount for bulk purchase to serve groups of teachers who tape *GHOSTWRITER* off the air.

These outreach activities generated increased professional awareness of **GHOSTWRITER**, and helped teachers learn how to use video-based materials effectively in the classroom. Evaluations distributed at each workshop consistently reported the workshops were useful and teachers intended to use **GHOSTWRITER** in their classrooms in the future.

AFTER-SCHOOL PROGRAM SUPPORT. Less than a third (32 percent) of the waking hours of a child aged 9 to 14 are spent in school, while approximately 21 percent are dedicated to watching television, 3.5 percent to schoolwork, and only about 1 percent to reading (Carnegie Corporation of New York, 1992, pp. 28-29). The **GHOSTWRITER** project's after-school initiative was developed to reach children in school-age programs, with special emphasis on reaching poor and minority children, who are among those deemed most likely to lose interest in reading and writing.

CTW's Community Education Services division (CES) developed and implemented a **GHOSTWRITER** outreach effort that targeted after-school programs. Its strategy was to identify a list of national partners among youth-serving organizations that:

- Served large numbers of target-age children the project was trying to reach, including minority and low-income girls and boys;
- Had strong representation in urban and rural areas;
- Had an expressed interest in literacy education, or an up-and-running literacy program with which CTW could ally.

Based on these criteria, CTW entered into partnerships with five national youth-serving organizations to facilitate distribution of **GHOSTWRITER** materials to after-school programs. These partner organizations were: Girls Incorporated, Boys and Girls Clubs of America, 4-H Youth Development Education, Girl Scouts of the U.S.A., and the YMCA of the USA. The partners' combined membership of 15 million, even when lowered by half or more to take into account their inclusion of age ranges beyond **GHOSTWRITER**'s target of 7- to 10-year-olds, represents a very large potential audience. Furthermore, those organizations reporting statistics on minority participation indicate that about half their members are minority. Each of these groups agreed to distribute and promote project materials in the organization in exchange for free copies of **GHOSTWRITER** magazines, which were to be disseminated to local programs that national administrators believed would make good use of them.

Throughout Seasons One and Two, CTW staff was in sustained communication with national office representatives of the youth-serving organizations as well as with state, county, regional, and local leaders. The purposes of this communication were to assess need for materials, gather responses to **GHOSTWRITER**, and help with local implementation and local promotion. Through this communication, CTW staff was able to make monthly adjustments to distribution lists and to respond to special and one-time-only needs. In addition, CTW staff attended state, regional, and national meetings and conferences of the youth-serving organizations and made presentations to program leaders and held workshops for individuals who work directly with children.

CTW also established outreach relationships with a number of unaffiliated community-based youth-serving groups, and with other local, state, and national organizations as well. Six geographical areas or "target sites" were singled out for special efforts at distribution and promotion through the mobilization of contacts in those areas. The areas were selected because they contained large numbers of poor and minority children and because CTW had several established local connections, including on-site CES coordinators, PBS stations, and individuals

connected with a wide range of community organizations. The six sites were Atlanta, GA; Baltimore, MD; Los Angeles, CA; the Mississippi Delta; San Antonio, TX; and the state of North Carolina.

As a result of CTW's outreach initiative, children in thousands of community-based after-school programs, child-care programs, and community organizations across the country have been using and enjoying **GHOSTWRITER**-based materials. In fact, the Boys and Girls Clubs of America chose **GHOSTWRITER** as one of its top-priority programs in 1992-1993.

Also as part of its outreach efforts, CTW has published an Activity Guide for leaders of after-school programs. The specific objectives for this Activity Guide are to:

- Encourage leaders in after-school programs to use **GHOSTWRITER** with children;
- Provide leaders with suggestions for activities that might help them to integrate **GHOSTWRITER** into their programs; and
- Get leaders to encourage children to watch **GHOSTWRITER**.

During Season One, 40,000 copies of the leaders' Activity Guide were distributed with each issue of **GHOSTWRITER** Magazine. In Season Two, 38,000 copies of the Activity Guide for leaders were distributed with each issue of the magazine.

Currently, CTW is developing what it calls an "enhanced **GHOSTWRITER** package" containing special guides, scripts, and materials for using **GHOSTWRITER** to spotlight social issues of concern to kids, such as neighborhood violence and drugs. These materials have been pilot-tested and researched in Los Angeles working with LA's BEST (Los Angeles' Better Educated Students for Tomorrow), an after-school enrichment program operated out of the Mayor's office and in conjunction with the Los Angeles Unified School District. The extended use of these materials over several months culminated in a citywide **GHOSTWRITER**/LA's BEST Community Jam Against Violence, which was staged at the LA Marathon and in which over 200 children performed songs, skits, poems, dance, and drills--all with an anti-violence, anti-drug theme--for an audience of over 1,000 children and adults.

GHOSTWRITER Videocassettes

GHOSTWRITER on videotape allows children to view their favorite shows, and to revisit particular mysteries or challenging literacy moments (e.g., how a code is broken). For teachers and leaders of after-school programs who want to use the series in their literacy curricula, **GHOSTWRITER** videocassettes free them from the chore of taping the show each week.

To make it possible for teachers and adult youth-program leaders to have access to **GHOSTWRITER** mysteries, CTW, in association with Great Plains National (GPN), has made 16 complete adventures available on videocassettes for distribution to schools and after-school programs. As described earlier, GPN also carries Teacher's Guides for Arcs 1-16 (free to purchasers of tapes). In their first 6 months on the market, over 1,100 tapes were sold to teachers and after-school leaders. In cooperation with Republic Pictures, CTW has also released three **GHOSTWRITER** titles for home video distribution.

GHOSTWRITER Promotion

The GHOSTWRITER project was backed by a national promotion and publicity campaign targeted to 7- to 10-year-old children and their families, as well as to decision-makers in schools. The promotional effort was designed to generate consumer awareness of the GHOSTWRITER project and to get children excited about becoming members of the GHOSTWRITER team. A host of ancillary products and materials were produced to promote the program, including bookmarks, pens, magazines, and posters. In addition, three national GHOSTWRITER sweepstakes were conducted during Seasons One and Two with the cooperation of local PBS stations and bookstores through Bantam Doubleday Dell. One sweepstakes offered children the opportunity to meet one of four superstars: Bo Jackson, Mayim Bialik, Kadeem Hardison, or Daisy Fuentes. The second offered them the opportunity to appear on an episode of GHOSTWRITER; and the third offered an opportunity to meet members of the team and have lunch with film director Spike Lee (also a GHOSTWRITER guest star).

Cast members have participated in dozens of events in 17 states--at malls, libraries, bookstores, schools, fairs, parades, and museums--during which free magazines have been distributed and Bantam books autographed. They have also made appearances at libraries and school assemblies to talk about literacy and the importance of completing school. For example, at the annual Washington, D.C. event, "Easter at the White House," GHOSTWRITER cast members urged some 1,000 children attending "You Gotta Believe: Kids Rally for the Future" to write letters to the President about issues that concerned them. As part of the event, the entire GHOSTWRITER team participated in a special "town meeting" during which kids had the opportunity to discuss some of those concerns with Attorney General Janet Reno.

III. FOUNDATIONS OF SUMMATIVE EVALUATION

In project management, CTW employs a collaborative style of operation known as the “CTW Model” (e.g., Mielke, 1990). Under this model, content and research experts work alongside producers, writers, and editors to design and produce materials for informal education that are both appealing and effective. This multidisciplinary team shapes a project from its initial conceptualization through its design and production, assessment, and--in an increasing number of cases--its extension via community outreach to specific target audiences.

In the case of GHOSTWRITER, an in-house Content staff was assisted by a National Advisory Board of internationally recognized experts in reading and writing, child development, evaluation, and community outreach (see Appendix F for listing of Advisory Board members). The Content staff was responsible for developing curriculum goals and objectives, and for maintaining the consistency of educational content in the various media components.

An in-house Formative Research staff served on the “core team,” starting with the research and development (R&D) planning phase, continuing through the development, launch, and early testing of the first season of programs, and then remaining operational throughout production of all succeeding programs.

Under the guidance of the GHOSTWRITER Project Director and the Vice President for Production Research, the formative research work in television was coordinated with separate research operations in print and outreach. Separate still was an in-house Summative Evaluation team responsible for commissioning and coordinating all studies contributing to the summative assessment of GHOSTWRITER, and conducting certain in-house elements within the summative evaluation program.

Formative research is dedicated to the improvement of the product by supplying feedback to project management, Content staff, and producers while the product is still in its formative stages. Summative evaluation, on the other hand, seeks to assess the performance of the completed project in its released and utilized form. Summative evaluation builds upon prior research efforts in the (pre-production) R&D phase as well as the formative research phase, but develops along different lines to address its distinctive issues. Some highlights from the R&D phase, as well as from the earlier stages of formative research will be discussed as background and context for the summative evaluation, which is a major focus of this report, and which is treated separately in Chapters IV and V.

The overall sweep of GHOSTWRITER’s research efforts is summarized below, displaying typical issues addressed separately in each of the three phases of a) R&D, b) formative research, and c) summative evaluation.

Typical Issues Addressed in the Three Research Phases of GHOSTWRITER

R&D	Formative Research	Summative Evaluation
<ul style="list-style-type: none"> • Assessment of What is Known • Needs Assessment • Target Audience Media Habits and Format Preferences • Target Audience Attitudes About Reading and Writing 	<ul style="list-style-type: none"> • Appeal Testing of Existing Materials • Script Review and Testing • Segment and Cast Appeal • Appeal and Comprehensibility of Complete Shows • Print Prototype Testing • “Enhanced Formative” or “Pre-Summative” Testing 	<ul style="list-style-type: none"> • Distribution, Awareness, Reach • Response/Appeal • Implementation/Use • Impact/Effects

Research and Development Phase

GHOSTWRITER’s curriculum evolved over an 18-month R&D period, beginning in 1988. Content staff reviewed the literature on children’s development of literacy skills and consulted extensively with educators and academic authorities on literacy education and child development, as well as with librarians, teachers, parents, and leaders of youth-serving organizations. In the early months of the project, prominent educators led four content workshops, focusing on such topics as reading comprehension, writing in the early grades, stages of reading development, vocabulary instruction, and the cognitive abilities of 7- to 10-year-olds. Project staff also held two separate weekend seminars in which project consultants were invited to comment on emerging goals. The first seminar helped to define the scope and useful objectives of a television-based literacy curriculum. Participants in the second seminar were invited to review a draft curriculum document.

In addition, CTW commissioned several baseline studies designed to yield further insights into: (a) the nature of the literacy problems faced by **GHOSTWRITER**’s proposed target audience, and (b) the kinds of stories and creative approaches 7- to 10-year-olds might find appealing. The studies explored children’s attitudes toward reading and writing, the demographic characteristics of our proposed target audience, children’s perceptions of mystery-adventure stories, and children’s interest in and enjoyment of these genres.

SELECTION OF FORMAT. From the outset, the project staff had a strong sense that a mystery-adventure format might be an ideal choice for the new television series. CTW’s mystery serial (“The Bloodhound Gang”) had been the most popular segment on its television science series *3-2-1 Contact*, and CTW’s serialized spoof on the venerable detective show *Dragnet* (“Mathnet”) was the most appealing segment on its playful mathematics television series *Square One TV*. Mysteries made for great drama and attentive viewing. Moreover, in a literacy context, the classic conventions of the genre--the cryptic note, the rogues’ gallery of suspects, the maze of clues, the chase, the clinching bit of evidence, etc.--afforded the development team a multiplicity of opportunities to feature text as both prop and plot device, and to cast reading and writing as handy problem-solving tools. Research conducted during the R&D phase confirmed that children of the target age do indeed love to read mystery stories and watch them on television. The studies also

suggested that children find mysteries so fascinating because they enjoy fast-paced action, piecing together clues, and trying to solve puzzles--all elements that could be incorporated into a mystery-based literacy series.

ENTER Ghostwriter. Very quickly, though, the creative challenge became one of finding a plausible rationale--a dramatic hook--for periodically introducing text into the video frame. Whatever the pretext, it had to be organic to the plot so that children would come to expect, even anticipate, these calculated interjections. As project staff mulled over the problem, the question ultimately boiled down to one of point of view. Whose words were they, anyway? Who--or what--was speaking? Once the issue was framed in that way, Ghostwriter, as a character, came alive.

Although Ghostwriter was vested with magical powers, at least insofar as his ability to maneuver in the realm of words was concerned, CTW producers were careful not to make him omniscient in other domains. Limiting his capabilities--in effect, endowing him with human frailties--made his character more sympathetic and ensured that Ghostwriter would not be an overshadowing superhero. He needed the team and the team needed him. To solve mysteries and resolve personal dilemmas, Ghostwriter and his friends would all have to work together, playing to each other's strengths and individual talents.

From the R&D phase emerged a vision of **GHOSTWRITER** as a multiple media project that would seek to invest reading and writing with mystery and power, and model effective literacy strategies for young viewers. Building on the **GHOSTWRITER** television series' appeal and momentum, an array of print and outreach programs would offer children additional real-world opportunities to read and write. And with the formulation of the program's basic story line and dramatic conventions, project staff had articulated a viable creative strategy for executing project goals.

Formative Research

Formative research is the behind-the-scenes ally of the creative process. It is used to develop or test ideas, materials, and production techniques with an eye toward applying this knowledge to shape future outcomes. This type of research--which allows selective "reality checks" on works in progress--has proved invaluable over the course of the **GHOSTWRITER** project. By the time of **GHOSTWRITER**'s debut in the fall of 1992, project staff had directed numerous formative studies in which over 6,000 children had taken part.

METHODOLOGICAL CONCERNS. From the beginning, the **GHOSTWRITER** formative research plan was guided by several methodological concerns. Wherever possible, the staff felt, these studies should:

- Represent geographically and racially diverse samples (that include minority and low-income children);
- Test children's and adults' reactions to individual components of the project and investigate how well these components reinforce each other in different situations;
- Test children's reactions to **GHOSTWRITER** in a variety of settings and circumstances: in homes (viewing alone or co-viewing with a parent), in after-school programs, and in schools;
- Evaluate the appeal of the program, activities, and characters;

- Evaluate comprehension of the plot, print messages, and literacy activities and strategies depicted in the TV program;
- Collect data on both macro and micro levels;¹⁰ and
- Try to test or cross-check findings from other GHOSTWRITER studies.

At almost every turn, the creation and production of GHOSTWRITER materials raised provocative questions that had no easy, formulaic answers. Experience has shown that the voice of target audience children needs to be heard continuously in the context of combining serious educational pedagogy within appealing and entertaining vehicles. Formative research with children can be helpful in developing *guidelines*; it cannot, however, generate a formula, because each creative element presents a stimulus package that has some unique or previously unexplored aspects.

Particularly at the beginning of the formative phase the number of questions to be asked was large indeed. Would a literacy show be engaging? Would children identify with the GHOSTWRITER team? Would literacy cliffhangers work as critical plot elements? Would the payoffs of reading and writing ring clear and true? Would children “play along” with the show? Would they try to read text on screen? How much on-screen print was too much? Can print on screen sustain dramatic tension? Would kids keep casebooks? These and many other content, creative, editing, and technical issues were clarified by formative research. The role of formative research in answering such early questions was not to establish generalizable principles or publishable studies; instead, it was to provide information that would be useful for making practical decisions in design and production.

As the project development advanced toward the launch, the formative research studies took on a more formal quality, as evidenced below.

OVERVIEW OF EIGHT FORMATIVE RESEARCH STUDIES. Early in GHOSTWRITER’s first season of production, CTW initiated a series of formative studies on four “test shows” (making up one completed Arc, “Who Burned Mr. Brinker’s Store?”) and on prototype print materials. Collectively these studies assessed the appeal, age-appropriateness, comprehensibility, complementarity, and impact of project components. The results supplied the first indications that the basic vision of the television series was sound and that GHOSTWRITER--in both its video and print incarnations--had the capacity to engage children of different ages and sexes, irrespective of their ethnic and socioeconomic backgrounds. The following synopses of eight of these “test phase” studies afford a glimpse into the intensity and scope of GHOSTWRITER research activities prior to launch:

1. **The In-Home TV/Print Study** (KRC Research & Consulting, 1991a). Evaluated appeal, use, and comprehension of test shows and prototype GHOSTWRITER magazines. Sample consisted of target-age children and their parents in 180 households in five cities in three states. Children were observed in their homes under four conditions: exposure to video only, to print as well as video, to print only, and to video while a parent also watched. Children were African-American, Latino, and white, from a range of socioeconomic backgrounds, with equal numbers

¹⁰ In addition to assessing children’s and adults’ “big picture” reactions to GHOSTWRITER materials, research needed to evaluate moment-by-moment reactions to key parts of the TV program and page-by-page reactions to GHOSTWRITER magazine, activity booklets, and teacher and leader guides.

of boys and girls. Major findings: The appeal of the program was high across testing conditions, although important obstacles to plot comprehension were identified. Parents who co-viewed along with their children endorsed *GHOSTWRITER*, primarily because of its interpersonal and moral lessons. The print-only condition revealed the potential of the magazine to interest children on its own; however, as a companion to the television series, close synergy was recommended.

2. **The Appeal Study** (Research Communications, Limited, 1991). Assessed overall and “moment-by-moment” appeal of the television program (characters, format, on-screen print). Researchers observed some 450 target-age African-American, Latino, Asian, and white children at six different sites around the country. Major findings: More than three-quarters of the participants rated the program “great,” and most said it was as good or better than their favorite TV show. Children identified with the characters, and were especially engaged with the teamwork and the moral dimensions of the series. The cliffhangers also proved to be quite successful at stimulating interest in the mysteries and encouraging viewers to play along.
3. **The Readability and Comprehension Studies** (Maguire Associates, 1991). Focused on readability of print on screen, plot comprehension, and understanding of literacy activities. In-school studies involved a total of 743 target-age children. Samples were ethnically mixed, and balanced between girls and boys. Students came from low- to middle-income households located in rural, suburban, and inner-city settings. Major findings: Overall, the print on screen posed challenges for slower readers and second graders, but it neither deterred them from reading nor detracted from the show’s overall appeal. Young viewers enjoyed reading along with the program, especially the messages from Ghostwriter. While children easily followed the plot in terms of the emotional conflicts portrayed, there were obstacles to comprehension of some aspects of the mystery story. Identification of these obstacles was instrumental in guiding the further development of the *GHOSTWRITER* series.
4. **The Discrete Show Study** (RMC Research Corporation, 1991). Because not all children might be able to view all four episodes in an Arc, this in-school study assessed children’s reactions to and comprehension of a single show. Sample comprised 493 Denver students in classes selected to yield 40 percent minority representation. Major findings: Appeal ratings were high among children who watched only a single episode. However, because the recaps (summaries of previous episodes presented at the beginning of shows 2, 3, and 4 in an arc) did not test well, these viewers worked hard to integrate the story elements presented in a discrete show. Viewers demonstrated understanding of the uses and the immediate plot payoffs of the literacy activities.
5. **The After-School Materials Study** (Children’s Television Workshop [CTW], 1991a). Small-scale study to test the appeal and utility of the *GHOSTWRITER* magazine prototype and the after-school program leader’s Activity Guide. Sample included 50 children in three different after-school centers in New York City. Participants were a mix of African-American and Latino children. Videotapes of episodes were also shown in two centers; in one center, children were permitted to take tapes home for viewing. Major findings: Reactions of the children suggested interest and enthusiasm in receiving and using the *GHOSTWRITER* materials. However, leaders and children alike offered several ways to make the activities easier to

implement and more appealing, such as providing additional group activities and linking the activities more to the television show.

6. **The After-School Appeal Study** (CTW, 1991b). Focus was the program's appeal and children's minute-by-minute involvement in the show in an after-school setting. Children were asked how often they would choose to watch the program over another activity offered at the center. Sample consisted of 85 predominantly minority and low-income children in three after-school centers in New York City. Major findings: More than three-quarters of the children expressed a preference for watching the series rather than engaging in any of the other after-school activities offered at the center.
7. **The Classroom Teachers Study** (CTW, 1991c). Assessed teachers' reactions to and interest in using **GHOSTWRITER** materials in their classrooms. Sample consisted of 28 second-, third-, and fourth-grade teachers in five states. Classes were chosen to provide a balance of children from diverse ethnic and socioeconomic backgrounds. Major findings: Nearly three-quarters of the teachers expressed an interest in using the television series in their classroom. Most teachers indicated that **GHOSTWRITER**'s stated curriculum goals were consistent with their own language arts/reading curriculum.
8. **The Action Segments Study** (KRC Research & Consulting, 1991b). In-school study focused on the appeal, recall, and comprehension of the "Action Segments" of the program (which invite children to engage in specific literacy activities). A total of 190 second-, third-, and fourth-graders in two New York City schools participated. Children were an even mix of minority and non-minority students. Major findings: Several ways to improve the Action Segments were identified. For example, increasing the duration, simplifying the messages, and more closely integrating the literacy tasks with activities modeled in the show were identified as means of increasing the appeal, recall, and comprehension of the Action Segments. In addition, the findings encouraged CTW to demonstrate the steps involved in mailing a letter.

This chapter has provided an overview of the research strategies and outcomes for the R&D phase and the early phase of formative research. Upon the premiere of the **GHOSTWRITER** project, formative researchers continued their servicing of day-to-day project needs, while summative researchers developed strategies for evaluating the completed project as a whole.

The report now continues with a discussion of summative evaluation strategies in Chapter IV and their outcomes in Chapter V.

IV. SUMMATIVE EVALUATION STRATEGIES

Summative evaluations are primarily assessments of a project's success in achieving its goals. As stated earlier, **GHOSTWRITER** has three curricular goals:

- To motivate children to enjoy and value reading and writing;
- To show children how to use effective reading and writing strategies; and
- To provide children with compelling opportunities to read and write.

These goals, in turn, have multiple prerequisite conditions which themselves can be construed as *instrumental* goals, i.e. interim steps that must be achieved before the specified educational (end) goals can be realized. These instrumental goals are reflected in the first three of the four principal domains of summative inquiry cited earlier:

- Distribution, awareness, and reach;
- Response/appeal; and
- Implementation/use.

Success in any one domain could have a direct influence on chances of success in others. For example, a television series that is neither universally available, nor recognized by its target audience as being available, nor viewed by its target audience, will have few beneficial effects. Unappealing print materials, even if broadly disseminated, will not motivate children to read or write. A literacy curriculum that cannot be or is not adapted or implemented to serve varying needs can only have a narrow impact. It should also be noted that the impact or effects at the culmination of these linked processes will undoubtedly extend beyond the three specified curricular (end) goals. For example, even though **GHOSTWRITER** had no specific educational goals regarding the social messages and moral issues that formed the dramatic vehicles for the mysteries, there is evidence that the series' treatment of these issues had powerful effects.

A Mosaic of Methodologies

The curricular goals and their prerequisites involve a range of variables far too broad to be addressed successfully by way of a single research methodology. Furthermore, different methodologies bring different strengths and limitations to bear even when focused on a single variable. For these reasons, the summative evaluation strategy for **GHOSTWRITER** was to employ multiple and complementary methodologies: collection and analyses of indicators of project effectiveness, naturalistic studies, and surveys.

A fourth complementary methodology, a controlled experiment, was explored in initial research planning. Ultimately, however, it was concluded that the requirements, both methodological and logistical, for a fair and rigorous experimental evaluation of **GHOSTWRITER** were beyond the scope of the financial resources and time frame available for the effort. The absence of the experimental component removes from the potential results the ability to make direct attributions of causal effect to the **GHOSTWRITER** project. (Related methodological issues are discussed in Appendix B.)

Conclusions about the impact of the project are therefore based on a wide range of data through the collection and interpretation of indicators, two naturalistic studies, and a series of six surveys. These were also supplemented by focus groups and in-house studies.

INDICATORS OF PROJECT PERFORMANCE AND SUCCESS. Indicators are data that yield information about a project's success in achieving its objectives. Some examples of indicators related to GHOSTWRITER are figures on distribution, logs of telephone inquiries, children's letters to GHOSTWRITER, and press reviews. Indicators are useful in quantifying specific operations and processes, but are sometimes difficult to interpret in isolation.

NATURALISTIC STUDIES. Less obtrusive than experiments and more comprehensive than surveys, naturalistic studies offer rich and detailed descriptions that illuminate the interrelationships among phenomena. In the case of GHOSTWRITER, they also proved invaluable in helping CTW staff understand how the project elements were combined for use in different settings.

To describe the range and variety of GHOSTWRITER use in schools and in after-school programs, CTW commissioned Education Development Center, Inc. (EDC) to conduct an ethnographic or naturalistic study in 20 settings in four cities (see Char, Miller, Isaacson, & Briscoe, 1993). The study started soon after the premiere of the television show in October 1992 and continued through May 1993, thus encompassing most of the school year and the first full broadcast season. Researchers visited each site regularly to observe GHOSTWRITER activities; interview administrators, leaders, and children; and collect samples of children's GHOSTWRITER-related work. Although its mission was to describe how GHOSTWRITER was used in school and after-school settings, the study uncovered considerable evidence that the educational goals of GHOSTWRITER were being achieved in these settings. This evidence is addressed in the next chapter.

CTW also pursued subsequent naturalistic studies in the Los Angeles area as part of a special linkage with LA's BEST (Los Angeles' Better Educated Students for Tomorrow), an after-school education and enrichment program under the auspices of the Los Angeles Mayor's Office. CTW's CES division wanted to test supplementary materials, based on GHOSTWRITER, that might help child-care professionals and families constructively explore with children issues of gangs and neighborhood violence. One of the GHOSTWRITER arcs, called "Building Bridges," which centered on these themes, was a natural inspiration for this project. A second naturalistic study was therefore conducted by a research team headed by the same principal investigator from EDC (Char & Isaacson, 1994). Data were collected through observations of materials being used, initial and exit interviews with program leaders, and group interviews with children in each site. The studies were conducted between mid-November and mid-December 1993, during GHOSTWRITER's second season, and were then followed up with CES interviews with a sample of adult leaders in the LA's BEST program (CTW, 1994a).

Letters to GHOSTWRITER

Dear Ghostwriter gang

I've started watching your show a few weeks ago. It's a great show. I really learned Something. I'm a 11 year old girl with a good immagination. I wish I had a friend like Ghostwriter. But I really like the mystery that was on today. It really left me stuck. I can't wait till Monday. I going to tape the next show for school. We are working on mysteries in school.... You're the best. Fact!

Sincerely,

-- [Name]

SURVEYS. However well-observed naturalistic studies may be, they cannot affirm the typicality or broad applicability of their findings. Surveys, on the other hand, can typify large populations by gathering information from carefully selected samples of identified populations such as--in the case of *GHOSTWRITER*--children, teachers, or television viewers. Through probability statistics, data from random samples can be generalized to broader populations. Whereas naturalistic studies can provide detailed descriptions of *GHOSTWRITER* use, survey results can estimate how typical or atypical particular uses are.

During Season One, as part of the summative evaluation program, CTW conducted or commissioned six surveys:

1. **Teacher Survey** (Peterson's, 1993). A mail questionnaire survey conducted in April 1993 of a random sample, stratified by source of teacher names. Approximately 1,200 teachers were surveyed to determine their use of and reactions to *GHOSTWRITER* materials.
2. **Leader Survey** (Hezel Associates, 1993). A telephone survey conducted in May and June 1993 of a purposive sample of 198 after-school program leaders to whom *GHOSTWRITER* print materials had been sent, to determine leaders' awareness, use, and impressions of these project elements.
3. ***GHOSTWRITER* Magazine Teacher Survey** (CTW, 1993). A mail questionnaire survey of teachers conducted in January 1993. Analysis was based upon 1,000 returned questionnaires selected from a larger pool of returns that were solicited in two ways: by mail to teachers (N = 5,000) and by instruments enclosed in copies of *GHOSTWRITER* Magazine (N = 15,000). The purpose of the survey was to assess teachers' evaluations and use of *GHOSTWRITER* Magazine.
4. **Nielsen Audience and Ratings Data** (Nielsen Media Research, 1992, 1993, 1994). The industry standard for national television audience measurement in the U.S., the Nielsen ratings provide estimates of how many households are tuned to *GHOSTWRITER* as well as how many people are viewing during an average broadcast minute. The Nielsen ratings also provide estimates of cumulative reach--that is, how many different households (or people) are reached by the *GHOSTWRITER* series over a specified length of time (e.g., a week, a month, an entire broadcast season). The Nielsen sample includes approximately 4,000 metered television households.
5. **Nielsen Recontact Survey** (Nielsen New Media Services, 1993a, 1993b). A telephone survey in two waves. Wave I, conducted in March 1993 was administered to a nationally representative sample of 634 households who had completed viewing diaries in November 1992 and had at least one 7- to 10-year-old child in the household. Wave II, conducted in May 1993, was administered to a nationally representative sample of 717 households who had completed viewing diaries in February 1993, and had at least one 7- to 10-year-old child in the household. This survey assessed the target audience's television viewing patterns and--for viewers of *GHOSTWRITER*--their use of and reactions to the show and other project materials.

6. **Awareness Survey (Rockman et al., 1993).** An in-classroom (written responses to orally delivered questions) survey conducted in April 1993 of 4,792 children in four cities to assess awareness and viewing of the *GHOSTWRITER* TV show, and awareness and readership of the *GHOSTWRITER* magazine. The original quota sample consisted of 6,719 subjects; of these nearly 2,000 were removed from the data set after failing a built-in validity check by indicating that they had viewed a non-existent TV show.

The report turns now to the four categories of summative evaluation outcomes: distribution, awareness, and reach; response/appeal; implementation/use; and impact/effects.

V. SUMMATIVE EVALUATION OUTCOMES

In previous discussions of summative outcome measures for the completed project as a whole, the notion has been introduced of considering outcomes separately for “instrumental goals” (i.e., prerequisites to achieving the end goals) and “end goals.” Among the instrumental outcomes, the first issues to be considered are distribution, awareness, and reach, followed by response/appeal and implementation/use. Finally the end-goal outcomes, i.e., impact/effects for the three curricular goals, will be presented, as well as impact/effects beyond those three specific goals.

Distribution, Awareness, and Reach

As considered here, “distribution” refers to physical distribution of *GHOSTWRITER*’s TV and print components: i.e., what was made available. “Awareness” is essentially self-explanatory; its inclusion is based on the premise that, in contexts such as *GHOSTWRITER*’s that depend upon voluntary exposure and willing engagement, lack of awareness of a process or product is functionally equivalent to lack of availability. “Reach” implies that the TV or print material actually reached its intended recipient. The general thrust of the implied model is that material has to be available before one can be aware of it, and one must be aware of it before one can accept or use it.

Distribution

TELEVISION. Two important distribution factors that have a direct bearing on subsequent size of audience are station clearances (i.e., the extent to which a program is available in local markets across the country) and program scheduling (the time slot in which a network or station decides to air a show). A program cannot attract a significant audience if only a handful of stations choose to broadcast it. By the same token, a universally available program is unlikely to achieve high ratings if it is scheduled in a disadvantageous time slot.

In the case of *GHOSTWRITER*, station clearances were very high: Over 300 public broadcasting stations carried the series from the date of its launch, making it accessible to 96 percent of all U.S. television households in both Seasons One and Two. Nearly two thirds of the PBS stations (64 percent) aired *GHOSTWRITER* at 6:00 p.m. on Sundays. Many stations broadcast *GHOSTWRITER* in a one-hour block, repeating the episode of the previous week followed by a new half-hour episode. This gave children a second chance to view each show.

PRINT. One of CTW’s objectives was to distribute about 2 million free copies of *GHOSTWRITER* magazine each month to children in the target audience via their classroom teachers, national youth-serving organizations, after-school programs, other community organizations, and local PBS stations. Data from the departments responsible for distributing the magazine showed that by the end of Season One this objective was being achieved, conforming generally to a model wherein roughly one half of all magazines were allocated to national youth-serving organizations and other after-school programs; one quarter to schools; and one quarter to PBS stations for distribution in their communities.

Distribution of *GHOSTWRITER*’s several other print components (e.g., Teacher’s Guides and Leader’s Guides) was described earlier in Chapter II.

Awareness

TELEVISION. Children in the Recontact Survey (Nielsen New Media Services, 1993a, 1993b) were asked whether they had ever heard of **GHOSTWRITER**. Fifty-five percent of the children interviewed in Wave I (March 1993) and 60 percent of those interviewed in Wave II (May 1993) reported having heard of the show. By far the most common way they learned about the **GHOSTWRITER** TV series was by flipping through the channels.

In the Awareness Survey of nearly 5,000 children in four cities (Rockman et al., 1993), 70 percent reported that they had heard of the **GHOSTWRITER** series. This can be interpreted within the context of a range of children's shows, some of which were well established and top-rated. Comparative data on six series are displayed in Table 1.

Table 1

**Total Self Reported Awareness of Six Children's
Television Programs by Children in Four Cities
(N = 4,792)**

Program	Percent Aware of Program
Darkwing Duck	98
Rugrats	77
Carmen Sandiego	70
Ghostwriter	70
Grimmy	39
Fun Hanna Barbera	33

Note: Sample size is reduced from original sample size to reflect the rejection of sample members who failed a built-in consistency check (claimed awareness and viewing of a non-existent TV series). Source: Rockman, et al. (1993). A report on the GHOSTWRITER audience in four selected ADIs: Awareness, viewing, magazines, and activities. San Francisco: Author.

According to the Awareness Survey, the most common method of learning about **GHOSTWRITER** was either through flipping through the television channels or through hearing about it from friends. Another awareness "filter" that could be operative here is awareness of public broadcasting more generally. For example, 69 percent of the children who had heard of **GHOSTWRITER** could correctly identify the local PBS channel. Of those children who had not heard of **GHOSTWRITER**, only 38 percent could correctly identify the local PBS channel.

PRINT. In the Recontact Survey (Nielsen New Media Services, 1993a, 1993b), at the time of the first wave of data collection (March 1993), 14 percent of the survey respondents said that they knew there was a **GHOSTWRITER** magazine; this proportion projects to more than 2 million children. By the second wave in May 1993, awareness had grown to 25 percent, projecting to over 3.5 million children. It should be noted that reading the **GHOSTWRITER** magazine would increase awareness of the TV series, but the reverse relationship would not hold because there was no possibility of promoting the magazine on the air, and because copies were already targeted for specific recipients with no opportunity to reprint.

In the Awareness Survey conducted by Rockman et al. in April and May 1993, 55 percent of children surveyed reported awareness of *GHOSTWRITER* magazine (see Table 2). Note, however, that these survey sites included areas where outreach efforts were concentrated.

Table 2

Total Self Reported Awareness of Four Children's Magazines
By Children in Four Cities
(N = 4,792)

Magazine	Percent Aware of Magazine
Sports Illustrated for Kids	92
Weekly Reader	83
Ghostwriter	55
National Geographic World	52

Note: Sample size is reduced from original sample size to reflect the rejection of sample members who failed a built-in consistency check (claimed awareness and viewing of a non-existent TV series). Source: Rockman, et al. (1993). A report on the GHOSTWRITER audience in four selected ADIs: Awareness, viewing, magazines, and activities. San Francisco: Author.

Reach

TELEVISION. The Nielsen ratings are the industry standard for national television audience measurement in the United States. These ratings data provide estimates of how many households or people are tuned in to a program during an average broadcast minute. Nielsen also supplies estimates of cumulative reach--that is, how many different (unduplicated) households or people were reached by a program over a specified interval (e.g., a week, a month, an entire broadcast season). Nielsen considers a household or a person to have been "reached" if there is evidence of viewing for at least six consecutive minutes. Once that threshold has been achieved, a household or person is counted only once as having been "reached," no matter how long the program is actually viewed. Only highlights from the voluminous Nielsen data on reach and ratings are included in the main body of this report. For the interested reader, a more detailed presentation of Nielsen ratings can be found in Appendix C.

According to Nielsen data, *GHOSTWRITER* reached an estimated total of 34 million persons in Season One, and 37 million persons in Season Two. Relative to Season One, *GHOSTWRITER*'s cumulative ratings for Season Two increased in virtually all significant categories: total persons, total households, minority households, low-income households, and households with a child between the ages of 6 and 11. The series was viewed in 4 out of every 10 American households containing a child between the ages of 6 and 11 in Season One, and in an even higher percentage of

such households (44 percent) in Season Two.¹¹ **GHOSTWRITER** attracted girls and boys in roughly equal proportions. **GHOSTWRITER**'s reach was about the same in low-income television households as it was in U.S. television households as a whole, but its reach in minority television households was even greater than it was in U.S. television households as a whole.¹²

Nielsen ratings data indicate that during an average minute of **GHOSTWRITER** programming:

- More than 1.5 million households were tuned in during Season One, with this number growing to more than 2 million households in Season Two;
- About 700,000 children, ages 6 to 11, were viewing in Season One, with this number growing to more than 900,000 in Season Two; and
- More than 2.5 million persons were viewing **GHOSTWRITER** in Season One, and more than 3 million were doing so in Season Two.¹³

In the heavy-viewing months of January and February 1994, **GHOSTWRITER**'s Season Two average audience ratings peaked at 6.0 in January and 5.7 in February for children ages 6 to 11. This 6 percent level meant that more than 1.25 million target-age children were tuned in to the show, on average, during each broadcast minute. Interpreted within a broader context, **GHOSTWRITER** drew a larger audience of 6- to 11-year-olds than four out of five children's shows on commercial television.

PRINT. Where the disparity between distribution and reach can be high in the medium of television, this is less of a conceptual issue in the medium of print. When the **GHOSTWRITER** Magazine distribution processes were first getting established, some copies did not reach their intended destinations. Once these logistical problems had been worked out, distribution and reach became quite similar in magnitude (see **GHOSTWRITER** and Youth-Serving Organizations, CTW, 1994b).

Response/Appeal

This phase of the process--response/appeal--is an important mediator between distribution and use. It refers to the initial impressions made by the **GHOSTWRITER** materials among target-audience children and their adult gatekeepers (parents, teachers, and group leaders). Concepts of "response" and "appeal" are not identical, but they are sufficiently related functionally for the purposes of this report to aggregate them.

TELEVISION. For children, a trial viewing period may last only minutes or even seconds. A negative first impression will terminate viewing. For adults in a gatekeeping capacity, the window of opportunity may be somewhat longer in duration, but first impressions nevertheless powerfully influence important decisions such as whether or not to adopt a program for use in school or after-

¹¹ Nielsen Media Research (NMR) does not provide ratings data for 7- to 10-year-olds, **GHOSTWRITER**'s target audience. The closest approximation Nielsen offers to this demographic segment is 6- to 11-year-olds, a slightly broader grouping.

¹² **GHOSTWRITER**'s above-average popularity with minority children was also documented in the Nielsen Recontact Survey (Nielsen New Media Services, 1993a, 1993b) and in the Awareness Survey (Rockman et al., 1993).

¹³ Figures reflect estimates of all persons, whether or not they were in the designated target-audience range.

school group settings. Several research-based insights into these first impressions of **GHOSTWRITER** are described below.

The very first indicators of appeal came from the eight formative research studies summarized in Chapter III. Although each study focused on a different set of research questions, all of them tested appeal. A summary by KRC Research and Consulting (1992) of the results of these studies concluded that “in every study, the appeal of the television program surpassed CTW’s highest expectations. **GHOSTWRITER** is extremely compelling for children irrespective of grade, ethnicity, gender, or socioeconomic background” (p. 6).

Among nearly 700 press articles about the launch of **GHOSTWRITER**, a total of 53 reviews were found--typically independent assessments written by local television critics. Of these, 51 were very favorable, while 2 were mildly negative.

In the Awareness Survey (Rockman et al., 1993), **GHOSTWRITER** was placed in comparative context with five other children’s programs (including top-rated *Darkwing Duck*). Data displayed in Table 3 reflect percentages of children reporting that they had both seen and liked the program in question. As evidenced below, nearly all of the children who watched **GHOSTWRITER** liked it.

Table 3
Total Self Reported Viewership and Liking of Six Children’s
Television Programs by Children in Four Cities
(N = 4,792)

Program	Percent Had Watched Program	Percent Had Watched And Liked Program
Darkwing Duck	90	67
Rugrats	69	66
Carmen Sandiego	61	52
Ghostwriter	54	52
Grimmy	31	27
Fun Hanna Barbera	26	23

Note: Sample size is reduced from original sample size to reflect the rejection of sample members who failed built-in consistency check (claimed awareness and viewing of a non-existent TV series). Source: Rockman, et al. (1993). A report on the **GHOSTWRITER** audience in four selected ADIs: Awareness, viewing, magazines, and activities. San Francisco: Author.

Additionally, the Recontact Survey (Nielsen New Media Services, 1993a, 1993b) reported that 80 percent or more of children surveyed in both Waves I and II who had watched the program rated **GHOSTWRITER** as “great” or “good.”

PRINT. In April and May 1993, the Awareness Survey (Rockman et al., 1993) asked about readership and liking of four children’s magazines, including the then-recently-launched **GHOSTWRITER** magazine. Data are displayed in Table 4 below:

Table 4
Total Self Reported Readership and Liking Of Four Children's Magazines
by Children in Four Cities
(N = 4,792)

Magazine	Percent Had Read	Percent Had Read And Liked
Weekly Reader	71	56
Sports Illustrated for Kids	65	61
National Geographic World	52	45
Ghostwriter	40	37

Note: Sample size is reduced from original sample size to reflect the rejection of sample members who failed built-in consistency check (claimed awareness and viewing of a non-existent TV series). Source: Rockman, et al. (1993). A report on the GHOSTWRITER audience in four selected ADIs: Awareness, viewing, magazines, and activities. San Francisco: Author.

In Table 4, the proportion of *GHOSTWRITER* readers reporting that they liked the magazine was a high 93 percent--ranking it second from the top according to this measure.

A survey of approximately 1,200 teachers who were exposed to *GHOSTWRITER* Magazine (Peterson's, 1993) found that 82 percent rated the publication "excellent" or "very good." For the Classroom Activity Booklet, the corresponding percentage was 72 percent, and for the Teacher's Guide it was 67 percent.

In the Recontact Survey (Nielsen New Media Services, 1993a, 1993b), 74 percent of children familiar with *GHOSTWRITER* magazine rated it "great" or "good." Based on a variety of measures and methods, it can be seen that *GHOSTWRITER* materials were consistently appealing.

Implementation/Use

This section describes that part of *GHOSTWRITER*'s unfolding when the project materials are actually consumed and put to use, when they are in the process of having their impact. It will be seen that implementation and use take many different forms. At this stage, *GHOSTWRITER* materials combine with whatever influences the participants and the environment bring to bear, leading to great variation in implementation and use. This extensive variation contributes to the difficulties of identifying, measuring, and attributing causal connections to the multiple effects of the *GHOSTWRITER* project.

Implementation and use of various blends of *GHOSTWRITER* materials typically occur within environments of homes, schools, and youth-serving organizations. Television and print materials, which have been tracked separately in previous sections, are sometimes used together in these environments, and sometimes alone. In a general sense, it is concluded that the television series was more widely viewed in homes than in group settings, and, conversely, that the magazines were more widely used in the group settings (e.g., Hezel, 1993; Char et al., 1993; Nielsen New Media Services, 1993a, 1993b). It will be useful, therefore, to take a more holistic view at this stage of the process, centering the analysis on the setting for use or implementation rather than on the type of medium used (television or print).

USE IN HOME SETTINGS. A special Nielsen analysis of the home audience for the **GHOSTWRITER** TV series indicated a high level of co-viewing: 40 percent of viewers in the 6 to 11 age range were viewing in the presence of an adult. Thirty percent were viewing in the presence of a younger child 2 to 5 years old (Nielsen Media Research, 1992). In the Recontact Survey (Nielsen New Media Services, 1993a, 1993b), it was reported that 45 percent watched with adults or older siblings, and 29 percent watched with younger siblings. This co-viewing presents excellent opportunities for family discussion of the series, which could enhance the educational impact, but this research provided no direct measures of family discussion.

USE IN SCHOOLS AND AFTER-SCHOOL SETTINGS. The richest descriptions of use in schools and in after-school youth-serving organizations come from the naturalistic studies by EDC (Char et al., 1993). The case studies are able to capture contextual variables beyond the ability of other methodologies. It is there, in the sociological and organizational context, that the greatest insights into use of **GHOSTWRITER** can be found. One learns there, for example, of a teacher who taped **GHOSTWRITER** at home for school use in a team-teaching effort with a colleague. They integrated the series into their literacy curriculum, and used every form of print support. Another teacher in a Texas school had to overcome significant administrative resistance to the use of television in the classroom at all, but was persistent in her conviction that the multicultural cast of **GHOSTWRITER** as well as the appeal and relevance of its literacy content would be beneficial for her bilingual class. She used the series in a variety of ways, including having children keep casebooks. Later, when she was on maternity leave, a substitute teacher developed a completely different use of the series, having the children write original **GHOSTWRITER** scripts which they then performed. In general, teachers used **GHOSTWRITER** magazine with much greater frequency than they used either the Teacher's Guide or the Activity Booklet.

In after-school youth-serving organizations, an equally diverse range of uses has been found (Char & Isaacson, 1994; CTW, 1994a). Repeatedly, the social and moral issues woven into **GHOSTWRITER**'s dramatic stories became the central focus of lessons and group activities, with the literacy aspects playing a supportive but subordinate role. Implementation of **GHOSTWRITER** in a group context made it possible to pursue reading and writing activities as social--rather than exclusively solitary--acts. The organizational requirements of a **GHOSTWRITER** club provided additional opportunities for children to develop leadership and management skills under adult supervision.

The uses to which the **GHOSTWRITER** project can be put are therefore shaped significantly by the adult mediators who do the planning and the utilization. The appeal of **GHOSTWRITER**'s presentation, the quality of its materials, and the social relevance of its dramatic vehicles attract adult mediators to play a significant role as teachers and group leaders. They, in turn, transform **GHOSTWRITER** into locally tailored experiences that can take countless forms. A critical quality of the **GHOSTWRITER** materials themselves is their flexibility, which allows them to be adapted to these different contexts and uses. Even if group viewing of television is logistically difficult, the thematic coordination among **GHOSTWRITER** components makes it possible to connect to home-based viewing.

As stated more fully in the companion report to this document, **GHOSTWRITER and Youth-Serving Organizations** (CTW, 1994b), there is a multiple benefit to alliances between institutions that produce mass-media educational materials and (a) youth-serving organizations and (b) schools. In **GHOSTWRITER**'s case, the media materials got powerfully extended; the youth-

serving entities and schools received motivating materials for use in working toward their own goals, and the children received the benefit of both efforts.

The report turns now to the final stage of the process monitored in this summative evaluation: impact/effects.

Impact/Effects

The previous sections of this chapter (distribution, awareness, and reach; response/appeal; and implementation/use) have all described outcomes within each of their respective categories. These outcomes were considered “instrumental” goal areas, or logical prerequisites to measures of impact or effects of the project as a whole. This does not mean, however, that they are of secondary importance. For example, the establishment of the national linkages between GHOSTWRITER and five different youth-serving organizations was in itself a noteworthy accomplishment.

Turning attention now to impact/effects of the project as a whole, it should be noted that GHOSTWRITER employs no theory or expectation that requires the project to be a sole influence on literacy. All effects and contributions of GHOSTWRITER that enhance literacy are valuable and welcomed, whether they take the form of direct influences on a child, or are part of a heavily mediated “package” of activities in a classroom or after-school setting. Similarly, GHOSTWRITER employs no theory or expectation that any one element of its several media offerings will be more or less effective in goal achievement than any other. It was anticipated, and later borne out by experience, that people in different situations would use different combinations of whatever GHOSTWRITER had to offer. The range of GHOSTWRITER’s effects is therefore expansive, due to the many different forms in which the project was experienced.

There are two major subdivisions for the results: (a) those relating specifically to the three curricular goals for the project, and (b) those falling beyond that limited domain.

Outcomes for GHOSTWRITER’s Three Educational Goals

GOAL I. The first goal is to motivate children to enjoy and value reading and writing. The purpose of Goal I is to help children to find a place for literacy in their day-to-day lives and move into the world of readers and writers. Since the language and experience of many children in the target audience are often different from the traditional school language and culture, it is critical to empower these children to see how reading and writing connect with their lives.

Both “enjoyment” and “placing value” are qualities or attributes that must be inferred, in that they are not behaviors as directly observable as, say, completing a particular crossword puzzle in 10 minutes with no errors. There are indeed conditions and rationales under which these qualities can be inferred. For example, adult mediators who know individual children very well and over time (e.g., parents, teachers, or after-school group leaders) are well equipped to judge when a child is enjoying or valuing reading or writing. To some extent, children’s self-reports can reveal indicators of enjoying and valuing various aspects of literacy. In the case of GHOSTWRITER, such self-reports are clear that children connect the program’s characters and issues to their personal lives. Finally, “enjoying” and “valuing” of reading and writing are also inferable from the actual behaviors of reading and writing because these behaviors will be sustained voluntarily only if they are enjoyed and valued. There are numerous indications of GHOSTWRITER’s effectiveness in this

domain, ranging from children directly replicating literacy actions performed on the show to their taking the initiative to write to the project.

One behavioral expression of Goal I came in a Girls Incorporated program, where the adult leader used GHOSTWRITER for three simultaneous purposes: to help develop teamwork, morals, and writing. This is an example of connecting literacy to real life. In viewing the series, she typically stopped the tape to ask the girls questions, or to have them identify clues or make predictions (thereby practicing some of the literacy strategies covered in Goal II). The indicators for further Goal I achievement came when the GHOSTWRITER-based activity was scheduled to end in the spring, and the girls themselves requested that it be extended into the summer (Char et al., 1993).

Addressing the motivational power of GHOSTWRITER in a classroom setting, the naturalistic study notes the following:

Among classrooms that already had an ongoing emphasis on reading and writing, a number of teachers spoke specifically of GHOSTWRITER being a significant, motivational factor in their children's literacy development. As two teachers said,

- I was very impressed with our children's improved test scores in writing. Writing has always been a drudgery for children: "We don't have anything to say." But with the GHOSTWRITER experience, because they [have] to write so often, writing is easy. It's just like walking. It's easy. Children are no longer afraid to write.
- The [children] do everything. They read every time they watch the show, therefore reading's not an arduous task. They're writing when they watch the show; therefore writing's not an arduous task. What more can I ask for? (Char et al., 1993, pp. 82-83).

FEEDBACK FROM THE FIELD

DEAR CTW,

I WAS REALLY EXCITED TO HAVE RECEIVED MY GHOSTWRITER MAGAZINES TODAY. FIRST OF ALL, THE COOL KIDS REALLY GRABBED MY STUDENTS' ATTENTION MAKING THEM WANT TO WRITE MORE. AFTER INTRODUCING THEM TO THE TEAM AND TELLING THEM THEY COULD SEE THESE KIDS ON CHANNEL --, I LEFT THEM ON THEIR OWN. THE FIRST THING THEY WANTED TO KNOW WAS "COULD THEY WRITE IN THE BOOKS?" (THEY USUALLY CAN'T BECAUSE WE ONLY GET ONE COPY!) I TOLD THEM YES--AND THEY GOT VERY BUSY READING AND WRITING. MORE QUESTIONS FOLLOWED, SUCH AS "IS ----- OUR CITY OR STATE?" "WHAT IS OUR ZIP CODE?" (I HAVE TAUGHT THIS BEFORE BUT I BET THEY'LL REMEMBER IT AFTER THIS!!) THEN I ASSIGNED THE "DOUBLE DEFENDERS" AS HOMEWORK AND EVERYONE RESPONDED "YES!"

I WAS THRILLED AT THEIR EXCITEMENT TO READ, WRITE AND HAVE HOMEWORK--BUT THE MOST EXCITING [THING] WAS TO SEE STUDENTS THAT DON'T NORMALLY READ AND WRITE WELL STRUGGLE THROUGH MATERIAL THAT WAS NOT THEIR READING LEVEL TO FIGURE OUT WHAT TO DO. THEY ARE ESL STUDENTS AND ALTHOUGH I ONLY TEACH MATH, SCIENCE, AND SOCIAL STUDIES, I TRY TO GIVE HOMEWORK THAT INCLUDES READING, WRITING, AND CRITICAL THINKING. I ALSO LIKE TO MAKE HOMEWORK ASSIGNMENTS THAT INCLUDE USING TELEVISION PROGRAMS.

THIS IS THE PERFECT PROGRAM FOR MEETING MY GOALS OF HOMEWORK ...THANKS FOR THE PROGRAM THAT I DON'T HAVE TO DO EXTRA WORK TO USE.

--/[NAME]/

FROM A TEACHER OF ESL TO 3RD AND 4TH GRADERS